

In the Claims:

Please cancel without prejudice claims 1 to 8 and add claims 9 to 19:

Claims 1 to 8 (canceled).

9(new). A measuring probe (1) for detecting agents in a gaseous medium and/or measuring concentrations of said agents in said gaseous medium, said measuring probe comprising

a sensor-active solid layer (4);

(B) a covering film (7) consisting of a liquid, said covering film (7) being arranged between said gaseous medium and said sensor-active solid layer (4) so as to cover said sensor-active solid layer (4); and

a plurality of electrodes (2) arranged in contact with said sensor-active solid layer (4) for electrical measurement of changes in electrical properties due to presence of said agents in said gaseous medium.

10(new). The measuring probe (1) as defined in claim 9, wherein said sensor-active solid layer (4) consists of an organic semiconductor polymer.

example?

Sub C1 11(new). The measuring probe (1) as defined in claim 9, wherein said covering film (7) consists of water and said gaseous medium contains water vapor.

12(new). The measuring probe (1) as defined in claim 9, further comprising means for electrical connection to a control circuit of a semiconductor

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component.

13(new). A measuring probe (1) for detecting agents in a liquid medium and/or measuring concentrations of said agents in said liquid medium, said measuring probe comprising

a sensor-active solid layer (4);

a covering film (7) consisting of a liquid, said covering film (7) being arranged between said liquid medium and said sensor-active solid layer (4) so as to cover said sensor-active solid layer (4); and

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a plurality of electrodes (2) arranged in contact with said sensor-active solid layer (4) for electrical measurement of changes in electrical properties due to presence of said agents in said liquid medium.

14(new). The measuring probe (1) as defined in claim 13, wherein said sensor-active solid layer (4) consists of an organic semiconductor polymer.

15(new). The measuring probe (1) as defined in claim 13, further comprising means for electrical connection to a control circuit of a semiconductor component.

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16(new). An array of measuring probes having predetermined geometrical dimensions and electrode structures, said electrode structures comprising electrodes made of different substances, wherein at least two of said measuring

probes each comprise a sensor-active solid layer (4); a covering film (7) consisting of a liquid, said covering film (7) being arranged between a gaseous or liquid medium containing agents and said sensor-active solid layer (4) so as to cover said sensor-active solid layer (4); and a plurality of said electrodes (2) arranged in contact with said sensor-active solid layer (4) for electrical measurement of changes in electrical properties due to presence of said agents in said gaseous or liquid medium.

17(new). The array as defined in claim 16, further comprising measurement means for measuring differing physical parameters.

18(new). A measurement procedure for detecting agents in a gaseous or liquid medium and/or measuring concentrations of said agents in said gaseous or liquid medium, said procedure comprising the steps of:

a) providing a measuring probe comprising a sensor-active solid layer (4); a covering film (7) consisting of a liquid, said covering film (7) being arranged between said gaseous or liquid medium and said sensor-active solid layer (4) so as to cover said sensor-active solid layer (4); and a plurality of said electrodes (2) arranged in contact with said sensor-active solid layer (4) for measuring electrical conductance changes due to presence of said agents in said gaseous or liquid medium;

b) doping a surface of the measuring probe (1) reversibly with said agents, so that an active surface is formed, whereby said electrical conductance changes

due to the presence of said agents in said gaseous or liquid medium occur;

c) measuring said electrical conductance changes due to the presence of said agents with the measuring probe provided in step a), wherein total electrical conductance measured by the measuring probe comprises partial conductances of the solid layer (4), the covering film (7), the active surface (8) and the gaseous or liquid medium, without compensation; and

d) after prior calibration, determining said agents and/or said concentrations of said agents from said electrical conductance changes measured with said measuring probe.

19(new). The measurement procedure as defined in claim 18, further comprising transmitting measurement results of said measuring over EDP networks and/or by telecommunications devices to authorized recipients.

In the Abstract:

Page 13 of the originally filed English language version of the U.S. National Stage Application: please make the following changes in the original abstract:

Summary ABSTRACT OF THE DISCLOSURE

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The invention describes a sensitive measuring probe (1) and an associated measuring procedure for the detection of agents and their concentration in gases and/or liquids and this measuring probe (1) can be used under the most varied real measuring conditions without additional expenditure and does not require a heating element. The measuring probe (1) for detecting agents in a gaseous or liquid medium and/or measuring their concentrations includes a sensor-active solid layer (4); a covering film (7) consisting of a liquid, such as water, which covers the sensor-active solid layer (4), and a plurality of electrodes (2) arranged in electrical contact with the sensor-active solid layer (4) for electrical measurement of conductivity changes due to presence of the agents in the gaseous or liquid medium. According to the measurement procedure of the invention, this requirement is fulfilled in that a covering film (7) consisting of a liquid is located above the sensor-active layer of a measuring probe (1) and the covering film (7) is included in the active zone of the measuring probe (1) and the combination of various- the measuring probe surface is doped reversibly with the agents to form an active surface that influences the measured electrical conductance and the electrical conductance is measured. Various measured partial conductances, in particular, of the substance solid layer (4), the covering film (7) and the active surface (8) formed between both of these, are included in the determination of the total conductance without compensation.

See figure 1.